IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Cancelled)

2. (Cancelled)

3. (Previously Presented) A data transmission method in a digital cellular radio network, the method comprising:

channel coding information to be transferred for transmission, the channel coding comprising

grouping bits to be transmitted into blocks having the size of 290 bits;

inserting 4 tail bits into the blocks;

carrying out convolutional coding for said blocks with a ½ code rate by employing GSM convolutional polynomes so that after the coding the block size is 588 bits;

puncturing the coded bits obtained by deleting 132 bits from each block;

transferring the information to be transmitted in a transfer system by generating a transcoding frame having a plurality of data octets, the first two data octets forming a synchronization pattern that consists of zeros, and said transcoding frame containing control bits and at least 288 bits of information to be transmitted; and

calculating a short checksum for some of the data octets used for transferring the information to be transmitted, transferring a cyclic redundancy check value obtained by using spare control bits, and employing the cyclic redundancy check value in synchronizing of the transcoding frame.

4. (Previously Presented) A method as claimed in claim 3, further comprising transferring the information to be transmitted in a transfer system by generating one frame from two transcoding frames by using a part of synchronization and control bit positions of the latter frame in the information transfer.

5. (Previously Presented) A data transmission method in a digital cellular radio network, the method comprising:

channel coding information to be transferred for transmission, the channel coding comprising

grouping bits to be transmitted in blocks having a minimum size of 288 bits;

carrying out convolutional coding for said blocks with a code rate of ½ by using GSM convolutional coding polynomes;

puncturing the coded bits obtained, the puncturing including deleting bits from each block so that each block contains no more than 456 bits; ~~and~~

transferring the information to be transmitted in a transfer system by generating a transcoding frame having a plurality of data octets, the first two data octets forming a synchronization pattern that consists of zeros, and said transcoding frame containing control bits and at least 288 bits of information to be transmitted; and

calculating a short checksum for some of the data octets used for transferring the information to be transmitted, transferring a cyclic redundancy check value obtained by using spare control bits, and employing the cyclic redundancy check value in synchronizing of the transcoding frame.

6. (Previously Presented) A method as claimed in claim 5, further comprising employing bits of the frame that have a known value for synchronizing of the transcoding frame.

7. (Cancelled)

8. (Previously Presented) A method as claimed in claim 5, further comprising modifying the information to be transferred so that the bit sequences comprised by the information differ from the synchronization sequences.

9. (Previously Presented) A method as claimed in claim 3, further comprising inverting each information bit prior to the transfer and deinverting each information bit after the transfer.

10. (Previously Presented) A method as claimed in claim 3, further comprising transferring the information to be transmitted in a transfer system by generating a transfer frame whose total length is 640 bits and the information transferred by which is applied to a channel coder as two blocks with the length of 290 bits.

11. (Previously Presented) A method as claimed in claim 10, further comprising inserting an identifier into the two blocks indicating whether a first block or a second block of the frame is in question.

12. (Previously Presented) A method as claimed in claim 11, wherein the identifier is in a predetermined position in each block, and further comprising inverting the identifier of the first block to form the identifier of the second block.

13. (Previously Presented) A method as claimed in claim 12, wherein first bits of both frames are employed in transferring supplementary information over the air interface, and wherein the first bits are supplementary information bits.

14. (Previously Presented) A method as claimed in claim 13, wherein the supplementary information bits are used for signaling discontinuous transmission.

15. (Previously Presented) A method as claimed in claim 13, wherein the supplementary information bits are used for transmission of synchronization information.

16. (Previously Presented) A method as claimed in claim 14, further comprising replacing the bit indicating discontinuous transmission in the first block of the frame at the base station with a fixed-value bit prior to channel coding, wherein the bit to be transmitted in the same position in the latter frame has an inverse value.

17. (Previously Presented) A method as claimed in claim 4, further comprising generating the transfer frame at a network interworking unit.

18. (Previously Presented) A method as claimed in claim 17, wherein the transfer frame comprises a radio link protocol frame.

19. (Cancelled)